THE MARINE RECORD.

DEVOTED TO COMMERCE, ENGINEERING AND SCIENCE.

$2.00 PER YEAR. ESTABLISHED 1878. 10c. SINGLE COPY.

VOL. XVIII. CLEVELAND, OHIO, JULY 4, 1895. NO. 27

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To consider and take action upon all general questions relating to the navigation and carrying business of the Great Lakes, maintain necessary shipping offices and in general to protect the common interest of Lake Carriers, and improve the character of the service rendered to the public.

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NAVAL FLEETS.

Some interesting statistics have been compiled recently by Secretary Herbert concerning the number and the types of war vessles of the leading navies of the world. The tables show that England has at the present time some 43 battleships, 12 coast defenders, and 18 armored cruisers, and 10 battleships building. The French navy contains 43 armored vessels built, and 20 authorized and building. Russia has 40 such vessels, Germany 32, and Italy 18. These navies have, in addition, many unarmored vessels. The number of war vessels in the service of England, including protected cruisers, ordinary cruisers, gunboats, and torpedo vessels, exclusive of torpedo boats, is 238, and some 48 additional ones authorized and building. The French navy contains in all 147 vessels, with 24 building. Germany has altogether 39, Russia 32, and Italy 72. Torpedo boats have come to take a very important part in naval warfar. France has 217 torpedo boats in service, and 42 authorized and building. England has 165 and 64 respectively: Italy 178 and 11; Russia 163 and 14: and Germany 119. The comparison between the United States and foreign navies afforded by this table is very significant. At present the United States has 3 torpedo boats and 3 building.

A DOMINION COMMITTEE.

Minister Haggart says that the Dominion government will appoint three commissioners to co-operate with the American commission in an investigation of the deep waterways project from the Great Lakes to the ocean. O. A. Howland, M. P., of Toronto, and two government officials will probably serve.

DETROIT RIVER RANGES.

Before another season of navigation opens, the entire length of the Detroit River from Detroit to Bar Point, may be navigated by ranges, and all risk of running upon shoals will be eliminated. Work on the two beacons at Ecorse, above Grassy Island, is nearly finished and will be lighted as soon as the light-house board can put in lenses. The board will then construct three beacons upon Grassy Island, establishing two more ranges. One will be completed in about two months, and the other two later in the year. When that is done the series will be complete. The channel is deep and reasonably wide, and by following the ranges sailing will be as secure as upon any part of the Great Lakes.

HUDSON RIVER BOATS.

When the People's Steamboat Line to Albany passed under the control of the Vanderbilts recently it was decided to build two fine vessels at a cost of $1,500,000 each. Contracts for them were awarded to Charles M. Englis, a grandson of the famous New York ship builder, John Englis. Work on the first of the new boats was begun about two months ago, and by next summer at the latest, she will be completed. Then work on her sister boat will begun.

The new boats, it is believed, will exceed in speed and lines the well-known Fall River Line vessels and will be the longest—400 feet—that have ever plied regularly on the Hudson. Each will have 400 staterooms, arranged so that all will be outside rooms. Heretofore no plan could be devised for giving every stateroom an outside window.

Each steamer will be equipped with engines of 8,000-horse power and, it is predicted will exceed in speed any craft that has ever traveled the waters of the Hudson. It is intended to make the launchings of the boats a big event, and it will doubtless attract thousands to the shipyards of John Englis & Son, at Greenpoint.

There will be three stateroom decks to each boat. The third or uppermost deck will be 300 feet long. The new boats will be side-wheelers. There will be a bridal chamber on each boat and the dining saloon, on the main deck aft, will be fitted up in white mahogany. The rest of the fittings being in white and gold. The building of these new swans of the Hudson is giving employment to many men, and it is hoped will do much to revive the ship-building trade in New York and vicinity.

NOTICE TO MARINERS.

UNITED STATES OF AMERICA—NORTHERN LAKES AND RIVERS—OHIO.

CLEVELAND WEST BREAKWATER (E. END) LIGHT-STATION.—Notice is hereby given that, on or about July 1, 1895, the characteristic of the 10-inch steam whistle at this station, on a crib behind the E. end of the W. breakwater, W. side of the entrance to Cleveland Harbor, Lake Erie, will be changed to sound, during thick or foggy weather, or when the entrance to the harbor is obscured by smoke, blasts of 3 seconds' duration, separated by silent intervals of 57 seconds, thus:

Blast	Silent interval	Blast	Silent interval
3 sec.	57 sec.	3 sec.	57 sec.

As soon as practicable, and without further notice, a sounding-board and reflector will be placed on the fog-signal house to throw the sound of the signal toward the lake in the direction of approaching vessels, and to reduce the sound in the city.

UNITED STATES OF AMERICA—NORTHERN LAKES AND RIVERS—NEW YORK.

BIG SODUS (INNER) LIGHT-STATION.—Notice is hereby given that, on or about July 6, 1895, the sixth-order fixed red light at this station, W. side of the inner entrance to Big Sodus Bay, will be moved to and exhibited without change of characteristic from the new structure recently erected at a point about 25 feet northerly from the tower now in use, and about 20 feet, respectively, from the E. face and the S. end of the W. pier, and 1,530 feet S. 3° 45′ W. (S. ⅜ W.), true, from the light on the outer end of the same pier.

The height of the focal plane of the light above mean lake level will be increased to 24 feet.

The new structure is a white, square, pyramidal, wooden tower, surmounted by a lantern with a copper roof. The hand rail around the lantern is black.

By Order of the Light-House Board:

JOHN G. WALKER,
Rear-Admiral, U. S. Navy, Chairman.

OFFICE OF THE LIGHT-HOUSE BOARD,
Washington, D. C., June 28, 1895.

Notice is hereby given that the Saunder's Point Shoal 3rd class can buoy, marking the shoal making out from Saunders Point (Gladstone) Little Bay de Noquette, Mich., reported adrift, has been placed in its proper position.

By order of the Light-House Board:

COM. J. H. DAYTON, U. S. N.,
Inspector 9th L. H. Dist.

NINETEEN steamers were launched from English shipyards in April, as against 24 in March and 11 in February. Five vessels of 11,850 tons were launched from the Wear, as against six of 14,715 in April of last year.

NEWS AROUND THE LAKES.

CHICAGO, ILL.

Special Correspondence to The Marine Record.

Capt. Inman, of the Inman Tug Line, at Duluth, was in Chicago Tuesday.

There is no grain being carried from this port by steamers outside of the line boats.

George Warrington's steam yacht Buena left for Milwaukee with a large party of his friends to attend the regatta.

A fine fleet of steam and sail yachts have left here during the last few days for Milwaukee to attend the regatta to be held there on the 4th.

The Dunham Towing and Wrecking Co.'s expedition, which went in search of their tug W. R. Crowell, which foundered off Michigan City in the fall of 1893 when going to the wreck of the steamer F. W. Wheeler, returned Monday morning after making a thorough search, but without success.

At Miller Brothers' ship yard the steam barge H. A. Root was in dock for repairs to shoe and some calking. The schooner yacht Toxteth was in for a general overhauling and bottom cleaning and painting, being fitted out by her new owner, O. S. Richardson.

J. B. Bates & Co., ship builders, made considerable repairs to the stern of the steamer Mark Hopkins. They put some new stanchions, bulwarks and sail on the steamer C. A. Street; recalked the deck of the barge Tuxbury, and gave the schooner Guido a new jibboom.

The new boiler connection pipe was fitted into the Christopher Columbus last Thursday. She had continued on her route, using only part of her boiler capacity until repaired. The explosion was being investigated this week by supervising inspector Galway.

The first of the Standard Co.'s new oil tank barges came in from Superior last Saturday in tow of the A. D. Thomson. It is proposed to lay a pipe line to extend from the refinery at Whiting, Ind., 1,500 feet out from shore, and to load the boats by means of this, but only 300 feet of it has been finished.

L. C. Wachsmuth, of this city, has bought the steam yacht Sentinel in New York, and is bringing her to the lakes via. the St. Lawrence. The Sentinel was built at Brooklyn in 1883, and is 102½ feet long between perpendiculars, by 19 feet beam, and 7 feet depth. Her gross tonnage is 74.58, and her net 47.64.

When the Pewaukee was lying in the river here last week she was boarded by four river pirates about 6:30 o'clock in the evening. Fred Mann, the cook, saw the fellows on deck and made them drop a lot of clothing they had gathered. They then leaped to the wharf and escaped. It was afterward found that they had stolen a pair of fine glasses valued at $30 belonging to Capt. Christofsen.

The U. S District Court last Thursday exonerated the steamer City of Naples from all blame in the collision with the schooner City of Sheboygan in the great storm of April 19, 1893. The court held that the accident was unavoidable, and that if any one were at fault, it lay with the schooner in taking a position directly in the lea of the Naples in such a storm. The accident was caused by lines parting. The costs of the case were assesssed on the libelant, who had sued for $7,340.

The launch of the steamer Victory, the first to be launched of the three colossal steel steamers built, was successfully placed in the water last Saturday afternoon at 3:50 o'clock, Miss Bertha Belden performing the christening ceremony. She will come out in about three weeks in command of Capt. George B. Mallory, who was on board when she went down the ways. There are some rather new points in the Victory's accommodations. The quarters for the crew will be below deck, instead of in deck houses, as has been usual. This will leave a vast expanse of deck, broken only by the two masts, smokestack and pilot house. Even the top-gallant forecastle, so common to ships all over the world will be left off. The texas will contain the captain's quarters, and will be surmounted by the pilot house and bridge.

The steel steamer Victory was launched at the ship yards of the Chicago Shipbuilding Co. at S. Chicago, Saturday. The launch was under the supervision of manager W. I. Babcock and the honor of christening the new steamer was gracefully performed by Miss Bertha Belden. The victory was built for the Interladen Steamship Co.. and is the largest steamer afloat on the lakes. Her dimensions are 400 feet over all, 380 feet keel, 48 feet beam, 28 feet molded depth. Her triple expansion engine will develop 1,600 horse power, which will be supplied with steam from Scotch type boilers. She will caary 4,000 tons of coarse freight at the present stage of water in the lakes and 6,000 tons when the twenty foot channel is completed. The launch was witnessed by a vast concourse of people numbering several thousands. The Revenue Cutter Calumet and the steamers Chief Justice Waite, Claribell and Macatawa were present with visitors from Chicago.

The committee appointed to arrange a programme for the International Waterways Convention to be held in Cleveland in September have completed their work. Seven important topics relating to the subject will be discussed by men of prominence who are acknowledged to be thoroughly familiar with their subjects.

Chicago has little to do outside of the flood of iron ore pouring into South Chicago, with this season's boom in lake business. Never since boats traded on the lakes has the local traffic of Lake Michigan been at a lower ebb than this season. The libeling of the steamer E. E. Thompson, Saturday, for a coal bill amounting to $4,000 is the best evidence of hard times in the lumber trade. Lumber is being brought from Menominee at 25 cents lower now than ever before, and many lumber schooners and steam barges are laying up rather than continue in that trade. On the other hand, the outlook for the big carriers is improving week by week, and the best season for several years seems to be ahead of boats engaged in the iron ore and coal trades. Predictions of $1 on ore from the head of Lake Superior and of 60 cents on hard coal from Buffalo to Chicago, are freely made by vesselmen for midsummer. Grain from Chicago will scarcely fill out the line boats for the rest of July. Shipments for the week were: Buffalo, flour, 9,847 barrels; wheat, 50,000 bushels; corn, 877,200 bushels; oats, 313,099 bushels. Ogdensburg, corn, 80,000 bushels; oats, 121,600 bushels. Erie, flour, 1,620 barrels. Kingston, corn, 45,000 bushels. Toledo, wheat, 127,000 bushels. Milwaukee, wheat, 24,985 bushels. Port Huron, oats, 38,000 bushels. Totals, flour, 11,467 barrels; wheat, 201,985 bushels; corn, 1,002,200 bushels; oats, 472,697 bushels.

CLEVELAND, O.

Special Correspondence to The Marine Record.

The steamer Grecian was docked at the Ship Owners' dry dock on Tuesday and it was found that four plates were damaged through her running on a boulder in Ashtabula Harbor. Two of the plates can be re-rolled and put back, but the other two will have to be renewed. It is expected that she can come out of dock by Wednesday night.

At the yards of the Cleveland Ship Building Co. I find the new Rhodes steamer well advanced. Manager James Wallace is keeping work keyed up to the highest pitch and the new ship will certainly be launched on contract time.

Work is brisk at the yards of the Globe Iron Works Co. and a large number of skilled shipbuilders are now employed there. The large steel schooner building for the American Transportation Co. of Fairport, O., will be launched in a few days and the fleet of canal boat will be dropped in the water regularly about one a week thereafter. The plans for the new Menominee Line steamer to replace the Norman shows even larger dimensions than I mentioned a week ago, 435 feet over all is now talked of and this would give her about 415 feet keel and on lines calculated to carry a full 5,000 tons on 17½ feet draft.

The steamer Oregon came out of the Vessel Owners' dock on Saturday with a new main deck frame and general repairs, and went to Erie to load coal, her first cargo for the season.

The Fourth of July being a national holiday will cause more or less detention to shipping at this port, as no loading or discharging will be carried on from Wednesday until Friday. The coal and ore docks are to shut down close.

The U. S. S. Michigan has got through her survey of the harbor this week and left for the islands at the west end of the lake. The navy department are actively at work this season on the lakes and more will be done for lake seamen and the general commerce in the way of getting out navigational particulars than ever before.

After a considerable effort on the part of the firm having the contract to right the steamer St. Magnus which has been laying on her beam ends at the mouth of the river for nearly a month, she was got upright on Monday. Of course she is a good deal more damaged than was anticipated and will require almost a rebuild to put her where she was before capsizing. It is a wonder that she was not run into a dozen times by incoming steamers while obstructing the approach to this port.

The Put-in-Bay steamer City of the Straits, of the D. & C. Line, is to be fitted with a calliope like the Southern river steamers, probably the circus parades at this port induced Manager McIntyre to add this equipment to his well and favorably known excursion steamer.

DETROIT, MICH.

Special Correspondence to The Marine Record.

The negotiations between Crockett McElroy and the owners of the City of Toledo for the charter of that steamer for the river trade, has been declared off.

The tug McCormick got a new wheel at Oades' this week.

Before the opening of navigation in 1896, Detroit River for its entire length will be marked by ranges. The two beacons near Ecorse, above Grassy Island, are nearly finished, and the light-house people will put in lenses and begin lighting them as soon as possible.

Capt. Singer, of Duluth, is looking for some new tugs to add to his fleet at the head of the lakes.

The Canadian Pacific Clyde-built steamer Alberta left Windsor at 3 o'clock Friday afternoon on her first trip on the route between Windsor and Port Arthur. The Alberta is 270 feet long by 28 feet beam, and has fore and aft compound engines. Capt. James McAllister is in command, with J. Pyette mate, A. Brown second mate, A. Cameron chief engineer, J. Donaldson second engineer, J. Brown steward and J. Line purser. She carried a crew of 50.

L. P. & J. A. Smith hope to finish their dredging contract below Bar Point this fall, but there is still a good deal of work to be done.

A shoal is forming about 1,000 feet from shore, and extends up and down the river for a long distance. It is barely shallow enough to make its presence felt, but it is developing rapidly until it promises to rival, as an obstruction, the famous middle ground between Port Huron and Sarnia. Boats are already beginning to fetch up there.

Active preparations have begun on the work of widening and dredging the River Rouge. Mr. A. J. Dupius will do the work under the supervision of Maj. G. J. Lydecker, Corps of Engineers, U. S. A. The river will be dredged and widened 500 feet. The marsh land will be filled up and good high land made of it. A little farther up the river a channel will be cut and dredged to a depth of 12 feet for a length of 300 feet. At this point the dock of the new Detroit Salt Works will be constructed.

The new postal service on the river works admirably, and is highly appreciated by the vessel men.

The tug Harley, owned by Mills, of Port Huron, struck Shipman's dock at Amherstburg, Sunday, while towing the new barge W. M. Comstock down the river, and was badly damaged. She was with difficulty kept from sinking, and was then seized by the Canadian authorities on the charge of coasting on the St. Clair River.

Ashley & Dustin put four three months-old homing pigeons of their own breeding on the steamer Kirby yesterday morning. The steamer was to stop at Malden, and it was thought she might have some trouble with her clearance papers. All four birds flew into the loft at 11 o'clock, bearing the information that the Kirby had cleared from that port at 9:48 with 300 passengers and that no trouble was had with the papers. It is estimated that they flew at a 40-mile clip.

DULUTH AND SUPERIOR.

Special Correspondence to The Marine Record.

Commander Mead, of the light-house service, is expected to soon file a report on the necessities of buoys in the St. Louis River up to New Duluth.

One of Williams, Daugherty & Upham's dredges is making extensive additions to the Richards & Poole dock at New Duluth.

Thomas Wilson, a deck hand on the City of London, fell into the water at the Mesaba dock Sunday night, and was drowned. He shipped at Chicago.

The steamer Liberty has come from Green Bay to enter the trade between Duluth, Ashland and Isle Royale.

Ashland shipments of ore last week were 96,767 tons, and for the season 825,725 tons.

The Mississippi & Northern railroad has completed its preparations for shipping ore over the Duluth & Winnipeg docks, and they will begin operations at once.

Inman's stern wheel excursion steamer Henrietta arrived last Thursday evening. She is a genuine river boat and used to ply the waters of Fox River in Wisconsin. She is broad, of light draught, and will carry 450 passengers, and will be used principally in the harbor and up the river.

Local vessel interests are much encouraged over the upward tendency in freight rates. They are inclined to join their faith, however, to ore, rather than to anything that has developed in the grain situation. They think grain freight will be good, but believe that the rates will be forced up by the demand for ore tonnage, rather than vice versa.

F. L. Gilbert has sold 1,400,000 feet of choice lumber to the Smith-Fassett Co., of Tonawanda. It was sawed at Hubbard & Vincent's mill, and is intended for immediate shipment.

N. G. Weston & Co., of Muskegon, who handle about 25,000,000 feet of lumber a year, have at last got into the Duluth market, effecting a purchase of 1,000,000 feet from the Merrill & Ring Co. Watson & Co.'s trade is largely with the east. They enjoy the same rail freights that are given to Saginaw. They have purchased lumber at Baraga and Lake Superior points before, but have never bought in Duluth.

The tugs Record and Zenith had a pretty race on the lake one day last week. Both had been out after tows, and the race took place on the return trip. Capt. King, of the Record, won by about four lengths in four miles. The Record now carries a broom on her house. She was built by the Globe Iron Works Company, Cleveland, and was named in honor of THE MARINE RECORD. Like her namesake, she continues in the lead.

BAY CITY, MICH.

Special Correspondence to The Marine Record.

The Marine Iron Co., builders of marine and stationary engines as well as deck hoisting engines, are meeting with a fair share of marine patronage this season. They have just completed extensive repairs to the engine of the tug George S. Brockway, of Port Huron, having put in new piston, cylinder head, entablature and crank pin. The Brockway will be engaged this season in raft towing. The firm have recently supplied deck hoisting engines to the steamers Abercorn, Metamora and Superior; also made important repairs to the engine and working machinery of Hubbell's No. 4 dredge. A steam windlass and capstan for the Waldo Avery has just been completed, and the outlook for future business is said to be very satisfactory, many orders being already booked.

While on her trial trip Sunday the stern of the yacht Restless was slightly damaged. Repairs were made at Wheeler's yard.

The owners of the barge King, which recently collided with the Johnson street bridge at Saginaw, have asked this city to pay $625.40 for the damage sustained. They allege that the accident was due to a negligent bridge tender and defective machinery.

Four boats have been reported by the Fessenden to the collector of customs. The A. A. Turner, the tug Louise, and fire tug Fashion were said to have incorrect papers, but the Turner was later found to be all right. The fourth must be something more serious as the officials refuse to divulge names. The steamer Holland was fined $500 for failing to renew her papers.

In a former letter published in the issue of the 13th inst. of THE RECORD, credit is given to the Marine Iron Works for building the boiler of the yacht Wahpitea. J. A. Flajole a well known manufacturer of steam specialties in this city furnished the boiler for this handsome steam yacht.

SANDUSKY, O.

Special Correspondence to The Marine Record.

The tug war fever has spread to this port. One day late last week it was announced in a Cleveland paper that the schooner W. K. Moore had left for Sandusky, where she would load coal for the upper lakes. The tugs Peerless and John E. Monk raced down the lake to meet the schooner. They went all the way to Cleveland, only to find that there was no vessel bound for this port. Capts. Moore and Whetstone entered their tugs and at once took out clearances for home, minus the tow.

The new schooner W. M. Comstock, just finished at Algonac, came here Monday for her first cargo. She took on coal.

Carkin, Stickney & Co.'s dredge No. 12 was put at work on the government contract Monday morning, taking the place of No. 14, which is tied up at the Big Four docks by a sheriff's attachment.

A locomotive with fifteen freight cars loaded with stone got away from the engineer last Saturday, and the entire train rushed down the track into the lake. The track is on a forty foot trestle, and the fifteen loaded cars and engine dropped into water 35 feet deep. The train hands jumped and were badly bruised. The entire outfit is the property of the Kelly Island Lime and Transportation Co., and will be raised.

PORT HURON, MICH.

Special Correspondence to The Marine Record.

The steamer Osceola is here, waiting for better business.

The schooner Andrew Jackson had the rather unique experience, last week, of being unable to raise a crew in this port. There is a temporary scarcity of sailors here just now.

The dredge at work at the foot of Lake Huron is making some great finds. A few days ago she brought up a piece of oak timber 38 feet long and 16 inches square, in an excellent state of preservation. A short time ago the dredge brought up an iron rudder post weighing several hundred pounds.

The new tug just completed by the Jenks Ship Building Company, will take her name from her owner, who thinks she will be one of the most complete harbor tugs to be found anywhere. She is 95 feet long over all, by 18 feet beam. She has a compound engine with cylinders 18 and 36 inches, by 30 inches stroke. The boilers will carry 140 pounds of steam. She has steam controlling apparatus for the engine, and a steam steerer as well. A large fire pump has also been placed in her.

Robert Goodwin, of Sarnia, has a sail boat in the water to which he has given considerable time. He has fitted her with two new masts, a cabin, and high coamings, and expects to take a cruise in her soon.

The steamer Mary is making two trips a day between this port and Algonac, and is doing a good business.

The fibre works are receiving large quantities of pulpwood from Canada.

All the papers have been speaking of the barge John E. Potts, which burned at Detroit, as the old schooner Bridgewater. This is an error. The Potts was built at Cleveland in 1856 by Moses. She measured 538 tons, and was named the Mohawk. She was a propeller, with double high pressure engines. She ran in one of the lines, probably the Western Transit Line, and was burned and laid up for several years. The hull was then purchased bg J. E. Potts and John Duncan, of Oscoda, who rebuilt her. She then towed behind the steamer Olean for two years. She was then converted into a steam barge by the Detroit Dry Dock Co. and was then named the John E. Potts, receiving the engines of the tug Music. The schooner Bridgewater was changed into a steam barge at the same time, and became the propeller Keystone, receiving one of the engines of the Olean.

ASHTABULA HARBOR, O.

Special Correspondence to The Marine Record.

Work was begun this week on the Youghoigheny coal dock, to make a firm foundation for the new car dumping machine which is to be erected there. The old planking will be torn up and new piling driven.

George H. Hopper's new yacht Florence, was launched at Driftwood, that gentleman's summer home, last Wednesday. Just after her launching, a furious squall caused her to capsize, and the seven men on board had some difficulty in getting ashore. The yacht is 54 feet long by 9 feet beam, and was built by G. W. Mason, of Geneva. She was already for sea at the time of launching, and steam was being raised in her boiler when the accident occurred. Captain John P. Devney went up from this port next day with the tugs John P. Gordon and Will and Harry, and by means of two lighters and a heavy chain soon had her raised and pumped out. She was then brought to Ashtabula. She is a beautiful yacht, handsomely finished in oak. She is at Devney's slip, being repaired. The damages are to the cabin, and are not heavy.

Carkin, Stickney & Cram's big dredge, No. 14, which is working here, was attached in a suit against the owners for about $30,000. As the dredge cleared a handsome sum for its owners last season, there will probably be little difficulty about the payment of the bill, if there is dispute over it.

A bursting steampipe early Saturday morning damaged the house of the tug William D. to some extent.

The crew were not in that part of the tug at the time and escaped uninjured. The McKinion Iron Works made repairs without delay.

The big steamer Centurion, which was in port Friday, carried a wedding party from Bay City—Mr. and Mrs. Charles Strever. The bride is a niece of Hon. F. W. Wheeler, and other members of the party were Mrs. Wheeler, Master Frank Wheeler, Mr. Irwin, and Mr. Reeves of Bay City, and Mrs. Durant, of East Saginaw.

Sunday morning as the Menominee steamer Grecian was entering this port with ore from Escanaba, an obstruction in the main river pierced her forward compartment which filled with water, and she settled on the bottom. The obstruction is supposed to be a rock lying in the river bed near the King portable machines. The steamer will go to the Globe dry dock in Cleveland for repairs.

MILWAUKEE, WIS.

Special Correspondence to The Marine Record.

Paul Huebner's famous egg-shaped life boat Rescuer reached Milwaukee from Detroit last week. The directors of the Continental Lifeboat Company will pay all the expenses of her trip. Two sizes of the boats will be built, the larger ones to be used at life-saving stations, and to be propelled by gasoline engines. The smaller size is to be used by steamers, and will be propelled by hand power in a similar manner to which the old-fashioned handcars are operated. The stockholders are George Niemiller, president; Conrad Cassel, vice president. A. A. Schilk, secretary; Bernard Huebner, treasurer. The Rescuer cost $4,000 and will carry 34 people.

The schooner Oneida has been having her bottom calked at the west yard.

The steamer Westover has been getting a large new boiler at the derricks of the south yards. The matter of a new boiler was decided on last winter.

The Elements of Navigation appeals to a special but not a small class, and appears seasonably. It is a small and compact volume. Its purpose is to explain in a clear, concise and comprehensive manner the various processes employed in ascertaining the position of a ship at sea and determining the correct course to be steered. The book assumes that the reader knows nothing about navigation, and that he is not acquainted with mathematics beyond arithmetic. No further knowledge of mathematics is necessary for the mastery of the practical navigation explained in this book. It is purely a working book of instruction, yet the meaning of the different processes is made clear, so that the student will know the reason for each step. This book covers the entire subject. No other small or elementary work does so, or if we may qualify the subject very few does. It begins with a complete explanation of the compass, variation and deviation, and the methods of correcting courses. The log and lead are treated, and the best methods of employing them in thick weather are set forth. Dead-reckoning is then taken up and rationally explained. That portion of the book which deals with navigation by observation contains only those workings which are of actual use at sea. Latitude by meridian and ex-meridian altitudes of the sun, moon, planets, and fixed stars is explained. The student is then told how to take chronometer sights of the celestial bodies for longitude. The theory, meaning and practice of Sumner's method is lucidly explained. A special point is made of showing the learner how to use the navigation tables and the nautical almanac, parts of which are reproduced for this purpose. Chapters on keeping log-books, use of danger angles, caring for and rating chronometers, and allowing for tides are also given. The book is illustrated with explanatory diagrams, problems worked out in full, and examples for practice.

THE PNEUMATIC SPORTING BOAT.

(ILLUSTRATED.)

A new invention designed chiefly for fishing and sporting in protected waters is the Layman pneumatic boat, herewith illustrated.

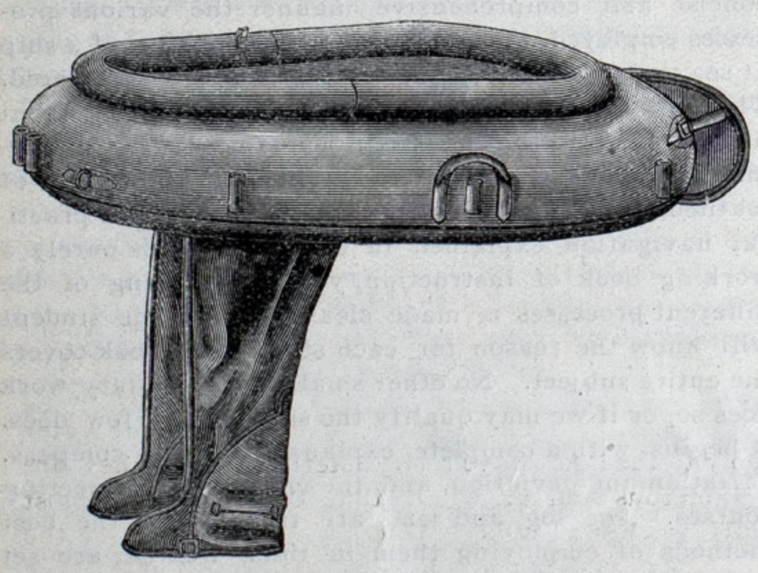
The upper or floating surface of the vessel is divided into four compartments, each separately inflated, and the construction is such that under ordinary conditions

PASSAGE OF HELL GATE, EAST RIVER, NEW YORK, IN THE LAYMAN BOAT.

the float can not be capsized. The boat, if such it may be called, is propelled with the legs, as in walking, by means of folding paddles or fins on the boot legs which close or feather with the forward motion of the leg and open with the backward stroke.

When the air chambers are not inflated, the suit lies close to the body supported by straps over the shoulders and in this condition may be used as a sort of a mackintosh. The air compartments are easily inflated either by the lungs or a small air pump provided with the outfit. The total weight of the boat is from 18 to 20 pounds and when inflated occupies a space of 45 by 32 inches, though it folds up in a small parcel when deflated.

As shown in cut, the boats can stand quite a seaway as the test was made solely to prove the stability of the floats, although as we have said they are designed prin-



cipally for the still water haunts of wild duck and such aquatic game as well as fishing. During the passage at Hell Gate the floaters got in the wash of two Sound steamers and it was found that they rode the waves admirably and floated with the buoyancy of sea-gulls.

A NEW CANADIAN LAKE STEAMER.

The passenger steamer Majestic, built to the order of the Northern Transit Co.'s line of royal mail steamers, has made her maiden trip successfully. Many new features are embodied in the plans and equipment of the Majestic. All of the latest improvements in marine architecture are embraced in her construction. In the interior appointments and furnishings no expense has been spared to make her one of the most elegantly fitted of ocean type for raising the heavy anchors. The machinery consists of fore and aft compound condensing engines of 1,200 horse power, with inverted cylinders, 28 and 54 inches in diameter, and 36-inch stroke. There are ample accommodations for 200 first-class passengers on the Majestic. The dining saloon has a seating capacity for 120 people. The steamer is excellently lighted throughout by electricity. A special feature of a collision. The hull was constructed by the Collingwood Dry Dock and Wrecking Co., of Collingwood, under the rules of Lloyd's bureau, supervised by Capt. T. F. Taylor, the chief inspector for the lakes of that well known classification society, securing for her a rating of the highest class. The equipment of the steamer is of the most modern type. She is fitted with automatic bridge telegraph, steam capstans forward and amidship, steam steering gear and steam windlass on the steamer, and one most attractive to summer tourists, is the immense promenade located on the hurricane deck nearly 200 feet long and 20 feet wide.

The Majestic is commanded by Capt. P. M. Campbell, the well known commodore of the White "Line," and in conjunction with her sister ships, the Atlantic and Pacific, will run weekly between Georgian Bay ports and the Soo. Mr. Robert Logan of Cleveland designed the construction of the steamer and her engines.

THE LAYMAN BOAT AS USED BY YACHTSMEN AND OTHERS IN DUCK SHOOTING.

TO NATURALIZE SEAMEN.

Navy Department officials expect the time will soon come when United States men-of-war will be manned by American seamen. Information has reached the department, from the ships in commission that the foreigners in the service are taking out citizenship papers. According to a statement that the Department sent to Congress at its last session, one quarter of the enlisted men in the navy were citizens of some other country. Since then the number has decreased.

In order to ascertain the exact number of foreigners in the service, Secretary Herbert has instructed the commanders of United States vessels to make reports to the department, beginning with the 1st of July. This information will be transmitted to Congress at the beginning of the next session for the purpose of securing legislation that will enable the men to be naturalized without being compelled to reside on shore.

VISIBILITY OF LIGHTS.

Some interesting experiments have been made on the visibility of the electric light at sea, by the governments of the United States, Germany and the Netherlands. The word "visible" in the report on the tests means visible on a dark night with a clear atmosphere. The result of the experience of the German committee was that a white light of one candle power was visible 1.4 miles on a dark, clear night, and one mile on a rainy night. The American tests resulted as follows: In very clear weather a light of one candle-power was plainly visible at one nautical mile; one of three candle-power, at two miles; one of ten candle-power was seen by the aid of a binocular at four miles; one of twenty-nine candle-power faintly at five miles, and one of thirty-three candle-power plainly at five miles. On an exceptionally clear night a white light of 3.2 candle-power was readily distinguished at three miles; one of 5.6 candle-power at four miles, and one of 17.2 candle-power at five miles. In the Dutch experiments the results were almost similar, but a 16 candle-power light was plainly visible at five miles. For a green light the power required was 2 for one mile, 15 for two miles, 51 for three miles, and 106 for four miles. The results of tests with a red light were almost identical with those with green, but it was conclusively proved that a white light was by far the most easily seen.

BOTTOM REPAIRS.

Now we wonder what a New York and purely salt water inspector is getting off relative to lake shipbuilding. A man who is trying to build up a register steps in and tells us that we are not building vessels strong enough in their bottoms at the same time the stupid should know that they are already too strong there and not strong enough in the upper longitudinal sections as all lake repairs clearly show. What does our quondam friend want? Has he in mind a plough or some mechanism for dragging up the ground as opposed to a floating body.

In a new fangled idea of bottom construction of which Mr. Stuart is the patentee, he says:

"The bottoms of these vessels will be 25 per cent. stronger than under the usual construction and wood sheathing in their case would be unnecessary. In running on rocks any vessel will receive more or less damage, but from ordinary groundings in rivers and channels, these vessels with their very strong bottom construction, receive no damage; should they strike rocks, the damage would be confined to the immediate neighborhood of the point of contact, instead of affecting the structure as a whole. As for the danger of total loss, that is practically eliminated in the general construction of these ships, unless it is the result of a collision, against which no vessel afloat is proof." Well! Mr. Sinclair Stuart wobbles away off in his statements, for if his patent bottom even gets punctured, as it certainly will, the cost is sure to be 100 per cent. greater to repair than it would be under the present system of construction.

In this connection a well-known expert in the designing and construction of metal vessels states that "a boat may be constructed of very thin steel plates and bars, and though very light when completed she may be structurally strong, and if of easy proportions may be fit to cross the Atlantic, but that this has little or nothing to do with the essential provisions required to resist violent contact with the ground. The Great Eastern, for instance, was structurally the strongest and largest iron steamer ever floated, but her bottom could no more resist grounding, say in the Neebish, than one of our lake vessels. When a large vessel suddenly rests on hard uneven ground the bottom plating will be either fractured or indented, whatever the thickness may be. He says that the bottoms of steel lake steamers are by no means weak, and that except in the transverse section they are stronger than ocean steamers of equal length having the same proportions. He then asks: "If a ship's bottom is proved experimentally to be amply strong for any 'afloat' stress to which it may be subject, is it necessary or advisable to increase the bottom strength for the purpose of resisting rocks or uneven hard ground, which can only be resisted to a limited extent, no matter how closely the floors and frames approximate to the scantlings essential to resist ordinary grounding strains?

"It seems to me," he says, "that it would be better for steamers subject to frequent groundings, to have the lower bottom about as light as it is now, but especially designed with a view to facilitate repairs, for even the lightest, well-arranged and most carefully constructed bottoms have proved amply strong enough to withstand the most intense 'afloat' stresses, and as the feature desirable in bottom plating is ductility, which should not be less than 36 per cent., with a minimum tensile strength of 58,000 pounds per square inch.

"Whereas it seems to be advisable to make the steel for upper deck stringers, sheer strakes and bilge plates at and near midlength and about the locality of the fore end of the engine and boiler space, of high tensile strength, say with an elongation equal to from 20 to 22 per cent. on a length of 8 inches, before fractures the remainder of the plating should have great ductility."

Furthermore this expert states that he would draw particular attention to the points mentioned in the foregoing and that it would seem that though the bottoms of our lake steamers were made as heavy as the steel belt of an iron clad—when the deadweight (cargo) ability would be nil—they could not even strike the rocks with impunity, for though such bottom plates might not be fractured or even severely indented, the fastening and framing, in fact, the internal structure, would be shattered or strained to destruction, and such injury would probably not be limited to the bottom, but would be transmitted above the bilges and would probably extend over the top sides and decks.

"If the upper bottom were made sufficiently strong to float the hull and cargo and the form slightly modified, the wooden ceiling could then be dispensed with. But further, corrosion of the upper bottom goes on as actively, if not more so than does the wear and tear of the lower bottom. Consider these as forming the upper and lower flange of a hollow girder, the latter being intact, while the former is pierced with manholes, does it not appear to the unscientific to make the lower flange, say 10-16 of an inch, as is commonly the case?

"Moreover, the lower bottom is the only one of the four large external surfaces of a ship that is not weakened by hatchways, gangways or scuttles.

"Now if a certain stress cannot be resisted, it v
seem to be wise to provide means for receiving
strain as lightly as possible or to localize the injur

"To accomplish the former desideratum, the bo
should be sheathed with elm or oak; this would a
the initial force of impact and distribute its ener
that in cases of slight grounding the plates woul
dom be fractured, and the internal straining woul
generally exceed the elastic limit of the fastenin
it is an expensive provision against grounding, a
is questionable whether it pays to sacrifice four o
inches in draft of water to attain comparative im
ty from grounding injury.

"The alternative plan as I have frequently sta
to make the lower bottom capable of being more q
and cheaply repaired, and to largely augment the
ness and structural strength of the upper botto
that a voyage to a dry dock for repair could be u
taken without undue risk with the lower bottom se
ly damaged."

Now, it seems to us that the foregoing is more in
with modern lake shipbuilding than any increase
tention to bottom structural ability could possibl
All attention has hitherto been directed to the bo
of lake ships and this, too, to the utter neglect o
upper works, or nearly so. If we want a plou
machine then let the lake shipbuilder design
thing of that description. On the other hand, if
to be a vessel then let her floatation and seaw
qualities come in somewhere and it need not be en
in bottom conglomerations, either, if we don't wa
increase the expense and detention of ship durin
tom repairs. In a word, too much attention has
given to the bottom structure and too little to
upper works.

LAUNCH OF THE VICTORY.

There was successfully launched from the yards
Chicago Ship Building Co., on Saturday afterno
steel steamer Victory, the largest vessel on the
Lakes. The steamer is 380 feet keel, 400 feet ove
and 28 feet depth of hold. Her engines will develop
horse-power. When drawing 14 feet of water
present limit of the Sault Ste. Marie Canal, it has
computed that the Victory will carry 4,000 tons
when the 20-foot channel between the Great Lakes
have been completed next year, she will carry 6,000
when fully loaded. Her cost, complete and read
service, will be about $225,000. In her construction
tons of steel were used and in all about 700,000 r
were driven. The Victory will be ready for servi
about three weeks and she will go into the iron ore
between Lake Superior and Lake Erie, with occas
trips to South Chicago. Her owners are the Inter-
Transit Co., which also owns the steamer Kears
managed from the office of Pickands, Mather &
Cleveland, owners of the Minnesota steamship flee

STAGE OF WATER ON LAKE ONTARIO.

The present low stage of water in Lake Ontario
called out a number of views, which are more or
misleading. Accurate information on this impo
subject, in so far as Lake Ontario is concerned
been obtained from Mr. John Annal, who for 20 y
past has had the care of the United States Engineer
boats and property at Oswego Harbor, and who has
each day during all that time, recorded the readings of
the United States Engineers' water gauge which was
established on the stone pier by Mr. J. W. Judson in
1838, and which has since then been the standard for all
water levels on Lake Ontario.

These daily readings Mr. Annal has sent to the United States Engineers' office, where they are tabulated with those of the past 60 years upon graphic charts which constitute a most interesting record of the surface movement, in general terms the variations of Lake Ontario are the result of similar variations in all the other lakes from which its waters come.

The water level has frequently been lower than now during the 58 years since the gauge was established, but it has never before been as low as now in the month

June, when it is always at or about the highest point of the year. As a regular thing, the lowest time of any year is in February or March. As the spring freshets occur, the lakes rise more or less gradually, between March and June, reaching high water level of the year about June 15th and continuing at about that stage till August, when a gradual lowering takes place until about the end of the year. In only one year—1866—has the water level gone down in the first half of June and then risen again. In that year there was a rise of one

this subject is without precedent, and engineers have no established evidence to guide them. This accounts for the difference in opinion of competent engineers; some have scouted the idea that the drainage will lower lake levels, while others have declared that there would be a perceptible decrease in a year. The task of determining the effect exactly and accurately would be almost impossible. The capacity of the sources of water supply to the lakes have to be determined and they are so numerous and uncertain that this involves almost untold work and study. One of the engineers of the war department states that the question was a grave one of much importance to the shipping interests of the lakes. In harbors where there is a great depth of water the effect might not be noticed, but in harbors where there is now but a bare sufficiency of water, the level might in time be lowered so as to destroy the harbor unless artificial means of deepening it were employed.

INLAND LLOYDS' SUPPLEMENT.

Manager McLeod has issued the Inland Lloyd's supplement for July. The steamers Rappahannock and Sacramento, built and owned by Capt. James Davidson, of Bay City, are the only new boats that are entered since the last supplement was issued. The net capacity of each vessel is 1,911 tons; they are rated A1* and valued, for insurance purposes only, at $145,000.

If destructive collisions continue as frequent on the Great Lakes as they have been so far this season, there will have to be more rigorous legislation governing the speed of lake vessels in fogs. The losses sustained by the insurance companies will drive them out of business or compel them to insist upon more caution, as the only alternative to an advance in rates which would cost vessel owners more than the loss of time implied in very slow movements when nothing can be seen a length or two away. The question of human life also enters into the problem, and it seems that the general government can hardly refrain from adopting stringent measures to lessen the danger of collisions in the crowded lake highways.

It is not so much that the number of vessels is increasing as that the average rate of speed is constantly rising which makes fogs more dangerous than they ever were before. The temptation and tendency to run steamers through thick fogs at a good rate of speed is very strong, in these days of low freights and necessary quick working, but it must be checked in some way. Already this season the losses caused by collisions in foggy weather must have amounted to at least a million dollars, and the season has hardly begun. If the destruction of property should continue at the same rate until winter the losses would be enough to ruin some of the marine insurance companies and make low charges next year impossible.

THE MERCATOR PROJECTION.

aim of the Hydrographic Office, U. S. Navy, e publication of its charts and sailing directions, nited to meeting the needs of nautical people. ublishing the sailing directions of the Great , it has adopted for those charts the Mercarojection which is commonly used for nautical pur-

It is impossible to represent, with great precision, lane surface like that of a chart, any large part of arth's surface. There will be distortions of one r another of the different kinds of projections or pments that may be used for charts, each has its tages and disadvantages. In choosing, reference be had to the special purpose for which the chart is led. Independently of the most important property Mercator projection to be described herein, it has s commended itself to seamen, for the reason that eridians and parallels are represented by straight and do not therefore, suggest confusion.

very kind of chart that has commended itself to ers in modern times, the straight line represents ack to be followed from place to place, and the pe- excellence for purposes of navigation of the Mer- projection, upon which the new charts of Lake n and Lake Superior are constructed, lies in the rty that any straight line that may be drawn to ent a track crosses every meridian at the same so that a vessel navigated by this chart maintains me true course throughout her passage along any ht line. This condition, namely, keeping the course ant, is the most convenient in practice, and besides, ces in all the calculations in which the place of the s concerned the utmost simplicity of which they apable; and the seaman, in making passages of duration, such as are required on the Great Lakes, s rid of all resort to astronomical navigation which y consists in finding his geographical position from vations of the heavenly bodies and from time carried conometers.

very other kind of nautical chart, the straight line, unless it coincides with the meridian, crosses ccessive meridian lines at varying angles, and in to follow the course that is laid out, it is necessary r the true course from time to time as the ship eds upon her voyage. To make the required altera- n the course, it is necessary to know the latitude ngitude of the position of the ship, and for the g of these elements vessels navigating the waters lakes are not generally equipped.

s chart will provide the maximum facility for navi- g under the conditions that prevail on the waters t covers, for in finding the direction in which the is to be steered, it is only necessary to draw a ht line from the place of departure to the place of ation, transfer the direction of this line to the r of the nearest compass-rose by means of a parallel and read upon the outer row of subdivisions of the ass-rose the angle that this line makes with the lian lines engraved upon the chart. This is the true e, and it remains the same throughout the passage; but, due allowance must be made, in steering by compass on board a vessel, for the variation of the compass and the deviation of the compass, in the accustomed manner which is now so generally and thoroughly understood by navigators on the lakes.

In this connection we note that the last issue of the N. Pacific Pilot chart contained particulars of the great circle course from Brito to Hong Kong and Yokohama, which, by the way, is a most valuable computation for the commerce of the N. Pacific Ocean and will doubtless be duly appreciated as the work of the Hydrographic Office.

YACHT SAILING.

A good sail, like a good suit of clothes, must fit at the start, and the nearer a sail comes to perfection in the beginning, the better it will last. Tight places can be stretched out and loose clothes taken up, but when you begin to re-cut a sail or to stretch and strain one part more than another, you are remedying the faults perhaps for the time, but in the long run the sail will get back into its original bad shape. A skillful hand can nurse and coax a seemingly hopeless sheet of duck into a tolerable sail, but for a racing boat it could only prove a handicap. Nowadays when so many small boats are designed practically on the same lines, the question of superiority rests often on either the handling or the canvas, though it may be claimed that the man who handles his boat well will know enough to look out for his sails.

It is generally accepted in this country that the perfect sail is one with a little fullness in the luff, and a flat, even leech. Now, even if such a sail well made in the first place, as a contemporary observes, and well put on the spars, can be ruined by careless setting. The first idea of every amateur yachtsman is to sway up the throat halyards as hard as he can. The throat halyards have a great purchase, and stretch the sail by the straight pull up the luff. With the peak, the amateur is more careful. He is warned to make fast when the wrinkles begin to show at the throat of the sail. Let this course be followed for a few weeks, and what will be the result ? The luff of the sail, even though it is well roped, has been strained to death, while the peak has been set only hand taut. The fullness has all been stretched out of the forward part, and more than likely the after cloths have become too slack by not being kept in their places.

It may be said that all the strain of trimming the main sheet comes on the after part of the sail. This is true, and the weight of the boom also must tend to stretch out the leech and after part, but these do not seem to make up for the dead pull that comes on the inboard end. Get the throat well up, but don't stretch it too far, and always keep the peak as high as it will go. The peak halyards are longer than the throat, there is more rope to stretch, and it needs more looking after if you want to keep the sail in its original shape.

Another favorite way of spoiling good sails is to have spars that are not stiff enough to stand the strain that will be put upon them. A weak gaff will stretch the sail too much at the points where the peak halyards are made fast to it, making a tight cloth at first, and then, if the halyard is moved, a slack cloth. All yachtsmen know that a gaff that buckles sideways throws a sail out of shape quicker than almost anything else.

THE NORTHWEST PASSAGE.

A dispatch to the Boston Herald refers to a revival of interest in whaling in Hudson Bay, two barks having made good catches there last year. These vessels have sailed again for the same region, and they will be followed by a third. The dispatch goes on to say:

"The belief is almost a certainty that a Northwest Passage exists, and that whales which have been hunted in the vicinity of the mouth of Mackenzie River and become shy have come through into Hudson's Bay and been found on the coast of Greenland. Irons have been found in whale killed on one side which were struck in previous years on the other side."

The Buffalo *Courier* pertinently observes that it seems odd that anyone should at this time seek to prove the existence of a Northwest Passage in such a manner as this, as if there were any doubt about it. It has been known for almost half a century that there were several Northwest passages. In 1846 the lost expedition of Sir John Franklin, having entered the Artic Ocean from the East, reached a point within a few miles of that which had been attained from the west by previous explorers, so that he is now accredited with the honor of having been the discoverer of the Northwest Passage. What he had accomplished was not, of course, known until long afterward, as all the members of his two ships' companies perished by starvation or in some other manner. The expeditions sent in search of Sir John Franklin explored so thoroughly the entire region that several routes are now completely mapped between Davis Strait, the Atlantic gate to the Artic Ocean, and Bering Strait, the Pacific gate. One of these search parties under Collinson and McClure entered Bering Strait in 1850, and McClure's Ship, the Investigator, reached a point 60 miles west of Barrow Strait, where she was beset in the ice and where she may remain yet, for all anybody knows to the contrary. McClure and his people were rescued by a sledge expedition from Sir Edward Belcher's ship, the Resolute, which had entered the Artic Ocean from the East, and McClure and his companions returned to England by way of the Atlantic in 1854, having actually traversed the Northwest Passage from ocean to ocean, on account of which feat he was knighted, and Parliament voted £10,000 to him and his crew. The Resolute, whose company rescued McClure, was herself abandoned in the ice, but she afterwards drifted out into the Atlantic, was picked up by a Yankee whaler, and was refitted and presented by the United States Government to the Queen

It will be seen from this statement that it is late in the day to be discussing the evidences of a Northwest Passage. Whether it is ever open all the way from ocean to ocean is another question, but even if such be the case, the Passage is of no commercial value.

LAKE FREIGHTS.

As announced last week the Lake Superior ore rate from the head of the lakes has since touched the 90-cent limit though it has simmered down again to the old figure of 85 cents with 75 cents from Marquette and 55 cents from Escanaba.

Coal freights are brightening up and there is now more life in Chicago grain shipments although rate is still at 1 cent, taken chiefly by the Line boats. Wheat to Toledo 1½ cents and oats to Port Huron at 1 cent.

While many shippers early in the spring contracted to bring down large blocks of ore are behind in their contracts, and have, during the past week, chartered outside tonnage to help out, still while we must chronicle carrying charges on wild cargoes as 10 or 15 cents higher than they were at this time a year ago, earnings of the boats show very little increase.

The difference in shipments in the month of May and the same month in 1894 is only a little over 50,00 tons, as in April last year about 50,000 tons were shipped from Lake Superior ports. With better prices for ore and much stronger demand and consumption this year, the output is bound to be larger than last season.

Coal shipments have been very light up to date, and a large number of boats that have been going up light will go in that trade later. Coal men will be in the market for tonnage the balance of the season and if there is any change in the ore freight situation there is every reason to believe that it will be in the vessel owners' favor.

The freight market during the past week was quite active and while some weak spots showed up early in the week, they have nearly all disappeared, and the feeling in coal and ore freights is firm. Escanaba cargoes were more plentiful than boats Saturday, and while regular shippers refused to pay more than 55 cents some owners were hopeful of getting an advance this week, in spite of the fact that Chicago is doing little or nothing. The rate from the head of Lake Superior holds steady at 85 cents.

Coal cargoes for Lake Michigan ports were offered quite freely last week and several that were consigned to slow docks at Milwaukee went without takers, although 5 cents above the regular rate was offered. Blocks of coal have been covered at 32½ and 35 cents, while the wild rate is strong at 30 cents.

TO REPLACE A FOUNDERED STEAMER.

The Lehigh Valley line is preparing to build another steamer to replace the foundered steamer Cayuga. Manager Henry recently said in reply to a question on the subject: "I do not want to say too much about it, but I presume we shall build. We havn't boats enough to keep us going. I am going east to see about it right away." There was something said about the Tacoma, which is now in the place of the Cayuga, being enough to do the work, but Manager Henry did not accept the suggestion. The Tacoma would have to do for this season but not for the future and Captain Henry always knows what he is talking about though when the new contract is placed it will probably go to the Globe Iron Works Co.

A MILLION DOLLAR CONTRACT.

And now it is learned that the employes at the shipyards down east are rejoicing over the announcement that the Newport News Shipbuilding and Dry-Dock Co. have secured the contract for building a $500,000 steel passenger and freight steamship for the Cromwell Line, the vessels of which run between New York and New Orleans.

The steamer is to be 325 feet long, 44 feet beam, and 33 feet deep. She will have accommodations for 400 steerage passengers. She will be equipped with 3,500 horsepower triple expansion engines and all latest improvements. Her speed is to be 15 knots an hour. She must be completed within eight months, or about the same time the big Plant Line steamer is to be turned over to her owners. The two vessels will cost over $1,000,000.

Several hundred men will be added to the force at the yard in the near future. The Newport News Shipbuilding & Dry-Dock Co. has more work on hand at present than at any other time since its establishment five years ago. The three gunboats for the government will be launched within the next sixty days.

LIGHT-HOUSE APPOINTMENTS.

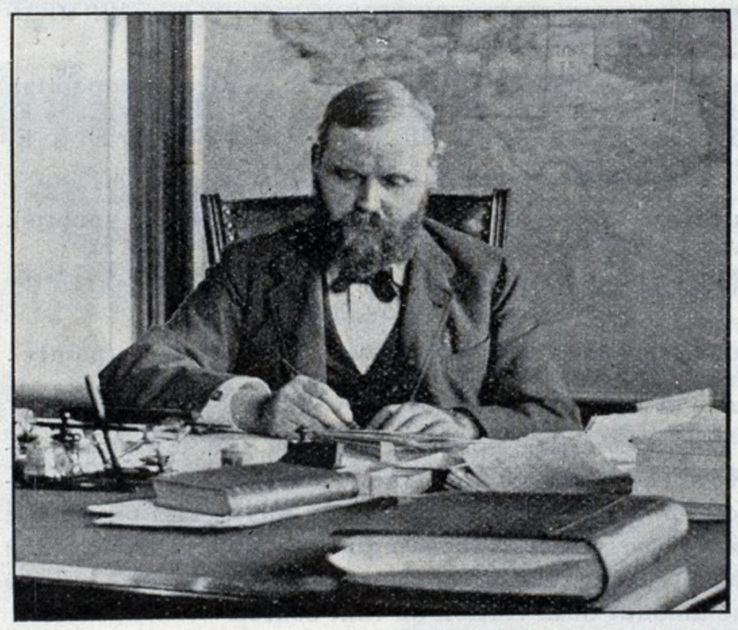
The secretary has made the following appointments in the light-house service: "Homer E. Page, keeper of light station at Windmill point; George S. Holden, assistant keeper at Detour station; S. P. Roger, keeper at St. Clair salt range; Otto Redman, second assistant keeper at Port Austin reef; Sidney A. Knox, assistant at St. Mary's Fall canal range; John D. Wuffy, assistant keeper at St. Clair flats range; A. W. Burke, third assistant keeper at Spectacle reef; Edgar B. Adams, assistant at Thunder Bay island and Walter Anning, assistant at Charity island, and Herbert N. Burrows, keeper at Port Austin reef.

CHIEF HARRINGTON RETIRED.

Prof. Mark W. Harrington, chief of the Weather Bureau, has been removed by the President, the order being made public Tuesday. There has been friction between Prof. Harrington and Secretary Morton, his official chief, for some time. On June 19, according to the statement which Mr. Harrington makes public, the President requested his resignation "because of personal interests," as Prof. Harrington phrases it He declined to resign and the President directed his removal, to take effect with the beginning of the new year, July 1.

Prof. Harrington was appointed by Secretary Rusk in 1890, from Michigan, because of his long acquaintance with meteorological matters. He was a member of the faculty of Ann Arbor University, and had the influence of the Senators from that state.

Professor Harrington says that he has been made a martyr to political necessities. "Among the public interests which I have steadily in view," said he, "were the preservation of the scientific corps and the protection of the bureau from the spoilsmen. When a scientific bureau descends to the four year office-holding plan, it at once loses prestige and ceases to be a desirable post for competent men."



PROF. MARK W. HARRINGTON.

A BUFFALO CONTRACT PLACED AT CHICAGO.

The city of Buffalo, N. Y., awarded the contract for their police patrol boat to the Marine Iron Works, Chicago, Ill., and delivery of this steam yacht (Australia) in charge of Capt. Pete Larson will be made under her own steam. She will clear from Chicago Wednesday, July 3d, making short stops en route at Milwaukee, Manitowoc, Mackinac Island, Rogers City, Port Huron, Detroit, Cleveland, Erie and Dunkirk. Her principal dimensions are: Length of hull 50 feet, beam 10½ feet, draft 40 inches. Triple expansion condensing engine; diameter of cylinders 4½x7 and 12 inches by 8-inch stroke. Boiler allowed 165 pounds steam pressure.

The Australia is a handsome, seaworthy craft, a credit to her builders, and those interested in steam yachting should make it a point to inspect her, although as prompt delivery is contracted for, she will only remain at the above ports over night.

OBITUARY.

(CAPT. THOMAS ENGLISH).

Another of the old-time lake masters has passed away in the person of Capt. Thomas English, who died last Friday morning at the residence of his son, Mr. Wm. T. English, on 178 Fifth street, Detroit.

Capt. English had been apparently in the best of health up to the night of his death. On Thursday he was moving about the city, and ate heartily that evening. Shortly after midnight the family heard his breathing with difficulty, and found him suffering from heart failure. He lived but a short time.

Capt. English sailed the lakes for over 50 years, and during his early career was an associate before the mast with Capt. Joe Nicholson, of Detroit, and other well-known mariners who have since died or gone into other vocations. He was known at every point along the entire chain of lakes and had friends everywhere. About 12 years ago he sold out his vessel interests and settled down in Detroit to enjoy the fruits of his busy life and hazardous calling. His brother, Capt. Alex. English, equally well-known on the lakes, died a year or two ago at his home in Chicago.

The captain left a widow, two sons and two daughters. The sons, William T. and Norman English, have been in the plumbing and heating business in Detroit for many years. The funeral services were held at the residence Sunday.

CAPTAIN BENJAMIN ACKLEY.

Capt. Benjamin Ackley was buried Tuesday afternoon. He was born in Cleveland in 1816, and began sailing early in life. He first visited Chicago at the age of 18, when he was in command of a sailing vessel. Twenty years later, in 1854, he settled there permanently, starting a wholesale coal business. His fortune was swept away in the panic of 1873. He made another by building railroads, but again met with business reverses, and died a poor man.

VISIBLE GRAIN SUPPLY.

The stocks of grain in Chicago elevators last Saturday evening were 17,365,000 bushels of wheat, 4,603,000 bushels of corn, 2,124,000 bushels of oats, and 34,000 bushels of rye. Total, 24,126,000 bushels of all kinds of grain, against 20,840,000 bushels a year ago. For the same date the secretary of the Chicago Board of Trade states the visible supply of grain in the United States and Canada as 44,561,000 bushels of wheat, 9,060,000 bushels of corn, 7,018,000 bushels of oats, 146,000 bushels of rye, and 134,000 bushels of barley. These figures are smaller than the corresponding ones a week ago by 1,664,000 in wheat and 439,000 in corn. The visible supply of wheat for the corresponding week a year ago decreased 1,195,000 bushels.

A STEEL SCOW.

On the lakes as elsewhere wooden vessels are giving way to metal craft, and as we noted a week or two ago the launch of the first steel schooner or tow-barge to be put afloat on the lakes we may now chronicle the fact of a steel scow having been successfully launched last week at Sault. St. Marie.

The well-known contracting firm of Dunbar & Sullivan built last winter at the Soo a steel dump scow to be used in their dredging work. The scow cost the moderate sum of about $10,000, and is the first one of the kind ever built on the lakes. She is 162 feet long, 25 feet wide and 11 feet high. She has eight pockets or compartments with a capacity of 400 yards. The scow or lighter will shortly be taken to Montreal to be used by Dunbar & Sullivan in a dredging contract on the Lachine Canal. A similar dump scow will be placed on the ways at once and rushed to completion in a much shorter time than it took to build No. 1.

NOTICE TO MARINERS.

Notice is hereby given that the Red Spar Buoy, marking Calumet Entrance, North, off South Chicago, Ill., has gone adrift.

By order of the Light-House Board:

COM. J. H. DAYTON, U. S. N.,
Inspector 9th L. H. District.

MARITIME LAW.

THOMAS vs. STEAMSHIP FLORENCE.

U. S. District Court, Southern District of New York.

SALVAGE—TOWAGE—STEAMER WITH BROKEN PROPELLER SHAFT—AWARD.—The steamship Florence, when out two days from Newport News, broke her propeller shaft, but by means of her sails, had arrived at that point within 140 miles of Sandy Hook. Here the steamship Parkmore, from Baltimore to Liverpool, came up in answer to the Florence's signals of distress and towed her to New York. The Parkmore was delayed by the towage about five days; there were no especial circumstances of difficulty or loss, and no passengers aboard either steamer; the Florence was getting near Sandy Hook, where abundant help could have been had; since the passage of the harbor act of Feb. 13, 1893, a vessel is authorized to deviate for the purposes of salvage; the Florence and cargo were worth $240,000; the Parkmore and cargo $460,000. Held, that $8,500 and expenses should be awarded as salvage.

Brown, J.: At about 6 p. m. of Saturday, October 27, 1894, the libelant's steamship Parkmore, bound from Baltimore to Liverpool, went to the assistance of the steamship Florence, in answer to her signals of distress, and thereafter took her in tow and brought her to the harbor of New York, where they arrived off quarantine at 1:20 p. m. of the 29th. The above libel was filed to recover salvage compensation.

The Florence had left New Orleans on October 6th, bound for Bremen, with a cargo of cotton and cotton seed meal. Meeting with bad weather, she had subsequently put into Key West, and afterwards coaled at Newport News, which she had left on October 22d. On the 24th, at 1.30 p. m. her propeller shaft broke in the stern tube, at a point 7 feet 3 inches from the aft end. She was at that time somewhat out of the course of most ocean steamers, but setting all sail during the following three days, making about 50 or 60 miles a day on a zigzag course, she had arrived to within about 140 miles of Sandy Hook, when the Parkmore sighted her and took her in tow as above stated. A new manilla hawser was supplied by the Parkmore, which was once broken during the night in a rough sea, and the towage was necessarily suspended until the morning. The Florence also steered badly, which added somewhat to the difficulty of towage, and the towing bits on the starboard quarter of the Parkmore were torn away. The actual time of towage was about 33 hours; and the time from sighting the Florence until anchorage in New York, about 44 hours. The whole detention of the Parkmore occasioned by her deviation was between four to five days. Neither vessel had passengers on board, except that the Parkmore had some cattlemen in charge of the 400 cattle that formed a part of her cargo.

The agreed value of the vessels and cargoes were: The Parkmore, $175,000, her cargo $285,000; the Florence in her damaged condition, $60,000, her cargo $170,000; total, Parkmore and cargo, $460,000; the Florence and cargo, $240,000. The extra expenses incurred by the Parkmore, including pilotage, port charges, coal, provisions, feed for cattle, and injury to her cable and bitts amounted to $1,845.42. Her ordinary charter demurrage was about $300 per day, and her officers and crew numbered 38.

The general circumstances of the salvage service were not such as not to call for very high compensation. Aside from the circumstances above mentioned of the breaking of the cable and the bitts, there were no special circumstances of difficulty or loss; and the work of connecting the cable with the Florence in the rough sea was mainly done by the men belonging to the Florence.

In fixing the amount of the award in this, as in all other salvage cases, I have endeavored to apply the rule laid down by Mr. Justice Bradley, in the case of The Suliote, 5 Fed., 99, 102, as one of the best expressions of the objects to be kept in view in salvage awards:

"Salvage," he says, "should be regarded in the light of compensation and reward, and not in the light of prize. The latter is more like a gift of fortune conferred without regard to the loss or sufferings of the owner, who is a public enemy, whilst salvage is the reward granted for saving the property of the unfortunate, and should not exceed that which is necessary to insure the most prompt, energetic, and daring effort of those who have it in their power to furnish, aid and succor. Anything beyond that would be foreign to the principals and purposes of salvage; anything short of it, would not secure its objects. The courts should be liberal, but not extravagant; otherwise, that which is intended as an encouragement to rescue property from destruction may become a temptation to subject it to peril." See The Alaska, 26 Fed., 597, 613, 614, and cases there sited; The Leisic, 20 Blatch., 268. See also The New Orleans, 23 Fed. 909, 911, and The Dapuy de Lome, 60 do. 921, 925 as to the encouragement of salvage services through suitable rewards to masters and crews.

I have carefully considered the circumstances urged by counsel, including the possible danger from the wheel, had heavy storms been encountered; and on the other side, the fact that here there were no passengers on either vessel; that the Florence was not wholly helpless, but under sail, and was getting so near Sandy Hook that abundant other help soon would have been offered her; and also the further circumstance that since the passage of the Harbor Act of February 13, 1893 (2 Sup. R. S., 81) a vessel is authorized to deviate for the purposes of salvage, without incurring any responsibility to cargo for so doing; so that less consideration than formerly is now to be given to the value of the cargo of the salving vessel.

Taking all the circumstances into view, my conclusion is that the sum of $8,500 will be a suitable award, besides the sum of $1,845.42 for extra expenses as above stated, which sums are accordingly allowed. Of the sum first named 4-5 will be awarded to the owners, and but 1-5 to the officers and crew, from the fact that the additional labor imposed on them was comparatively small. From the latter sum $500, is awarded to the master, and $150 to the chief engineer; and the residue of the 1-5 to the other officers and to the crew in proportion to their wages. Decree accordingly, with costs.

January 2, 1895.

AMPLITUDES.

The following approximate amplitudes of the sun's rising will be given each week in this column during the season of navigation. A second bearing of the sun may be taken at sunset by reversing the bearings to read west instead of east, as for example, N. E. by E. for a sunrise bearing would read N. W. by W. for a sunset, or E. 30° N. to W. 30° N.

LAKE ERIE AND S. END LAKE MICHIGAN, LAT. 42° N.

Sunrise.	Bearing (degrees).	Bearing (points).
July 5	E. 32° N.	NE. by E. ⅛ E.
July 10	E. 30° N.	NE. by E. ¼ E.

LAKE ONTARIO, S. END HURON AND CENTER LAKE MICHIGAN, LAT. 44° N.

Sunrise.	Bearing (degrees).	Bearing (points).
July 5	E. 33° N.	NE. by E. ⅛ E.
July 10	E. 31° N.	NE. by E. ¼ E.

N. END LAKES HURON AND MICHIGAN, LAT. 46° N.

Sunrise.	Bearing (degrees).	Bearing (points).
July 5	E. 34° N.	NE. by E.
July 10	E. 33° N.	NE. by E. ⅛ E.

LAKE SUPERIOR, LAT. 48° N.

Sunrise.	Bearing (degrees).	Bearing (points).
July 5	E. 36° N.	NE. ⅞ E.
July 10	E. 34° N.	NE. by E.

With a compass correct magnetic, the difference between the observed and true bearing will be the variation for the locality. If there is any deviation on the course the vessel is heading at the time of taking the bearing, the result after the variation is applied will be the amount of deviation on that course.

GAS BUOYS.

Commander Charles V. Gridley, U. S. N., inspector of the tenth lighthouse district stationed at Buffalo has received two Pintsch gas buoys which, it is understood will eventually be located at the most exposed points on Lake Erie, between Buffalo and Erie.

They are the first two buoys of this character that have been ordered for the lakes, although they are being used with success at various seaports and by the principal foreign maritime departments. The gas buoys are made in different sizes and capacities but they will burn steadily for 176 consecutive days and experience has demonstrated that they cannot be extinguished by the most violent gale or the wildest sea. Each buoy weighs 5,860 pounds, is eight feet six inches in diameter, and 20 feet long. The light rides 11 feet above the water, and on a clear night can be seen a distance of from eight to ten miles from the deck of a ship.

The light-house board approves of these aids to navigation and is prepared to furnish them on the Great Lakes as aids to navigation; but congressmen from the lake districts have so far failed to fully appreciate the necessity for the use of them, and Congress has not called upon the appropriation committee for the money with which to purchase the gas buoys, or at least as many as could be used to advantage.

CUTTING GASKETS.

Some engineers think they cannot cut gaskets without a pair of compasses, a sharp knife and plenty of time. In many instances none of the requisites are at hand. For a plate flange lay the sheet of packing smoothly in position and with a ball pene hammer cut through one of the bolt holes; two or three fairly struck blows will drive out a circular piece of packing, and a bolt may be put through the hole. Another bolt hole is cut out diametrically opposite the first, and a second bolt placed in position; then proceed to cut out the rest of the bolt holes, then trim off the outside of the flange, striking with the face of the hammer, making the corner of the flange do the cutting. After this is finished the inside of the cutting may be cut out. It does not improve the engineer's temper to find that he has forgotten to cut out the center of a flange gasket, and has to take down one of two connections to remove the fragments of rubber after steam pressure has torn a hole through it. For a hose union, cut a circle with a pocket knife then slip over the end of the union and twist the packing back and forth a few times with the fingers. The shape of the union will be plainly marked around the under side of the packing. By following the line thus marked with a knife, a neat packing can be quickly cut out. A pipe union can be cut in a similar manner, except a little hammering is needed around the outer surface of the sheet of packing to mark thereon the shape of the gasket. A cylinder head gasket, when one is necessary, may be marked in the same manner as a flange gasket, after which it is better to strike the circle with a pair of compasses and carefully cut away with a knife to avoid possible damage to the cylinder head. Steam chest packing may have the bolt holes cut with a hammer, but care should be used or the threads will be damaged so that the studs will not go in place easily. —*The Tradesman.*

LITERARY NOTES.

Mr. Poultney Bigelow, a guest of the German Emperor on his yacht at Kiel, will supply an article on the fetes for *Harper's Weekly*. The article will be richly illustrated.

The high-water mark of pictorial interest in the Napoleon Life, now running in *The Century*, is reached in the July number, which will contain among its illustrations a picture by Myrbach, of Bonaparte and his generals at the Tivoli Garden in Cairo; a spirited picture of the Battle of Aboukir, by Checa; and "Josephine at the Door of Napoleon's Chamber," by Pape, all original drawings made especially for this work; also reproductions of Gerome's "Bonaparte in Egypt," Sergeant's "Kleber at the Assault of Acre," "The Assassination of Kleber at Cairo," by Callias, Bouchot's "Bonaparte at the Council of the Five Hundred at St. Cloud," "Installation of the Council of State," by Couder, and portraits of Cambaceres, Lebrum, Joubert, Gohier, Barras, Lanusse, and Kleber, and of Napoleon as first Consul and as a member of the Institute.

"The Design, Construction and Maintenance of a Marine Boiler" is the subject of a very interesting and instructive pamphlet of some 30 pages, prepared for the assistance of captains and officers intending to take examinations prescribed by the British authorities for steamship certificates. It is illustrated with diagrams and examples of useful computations, and presents much data that has resulted from the observation and experiment of recent years. London, published by the *Shipping World*, Effingham House, Arundel street, W. C.; price 3 pence.

AMPHIBIOUS.

In the French River country, for towing logs on the lakes and swamps in the rivers, they use a steamboat called an "alligator" 30 feet long, 10 feet beam and 3½ feet sides built strong and with three standing keels eight or ten inches below the bottom. These are steel shod something after the style of a sled. The equipments are paddle wheels on the side, and a drum with one-half mile of steel wire cable. The boat is run ahead and anchored to the shore or in the shoaler spots. The cable is attached to the raft and wound up with the drum. When they come to a rapids that cannot be run, the cable is run up on the portage and the steamboat goes overland on the keels mentioned, the boiler being kept level with a screw aud they quickly move over a place a wagon could not run on.

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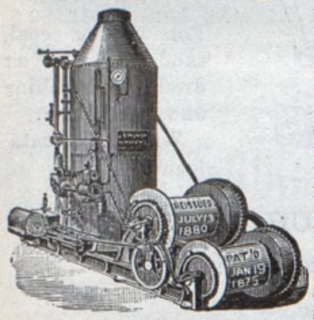

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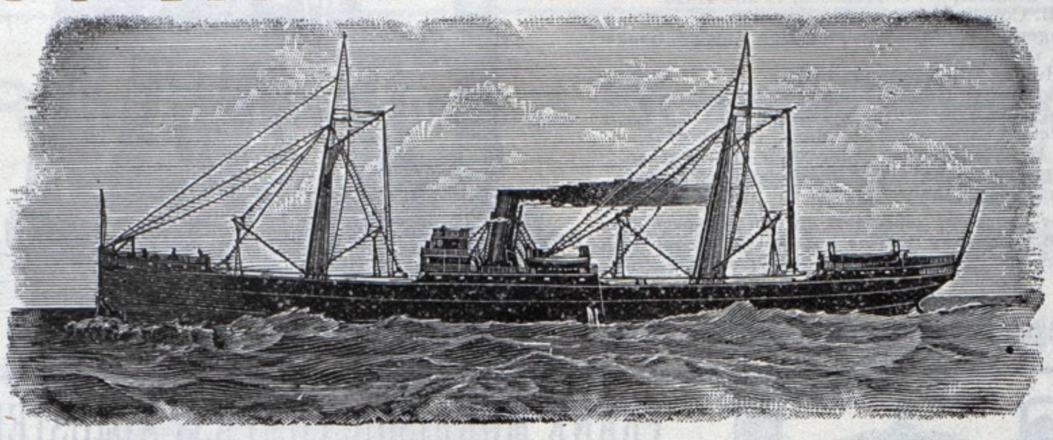

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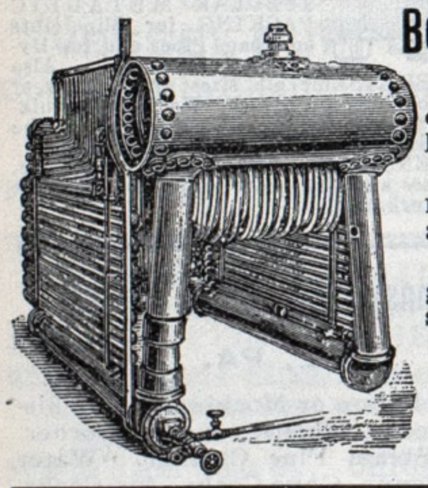

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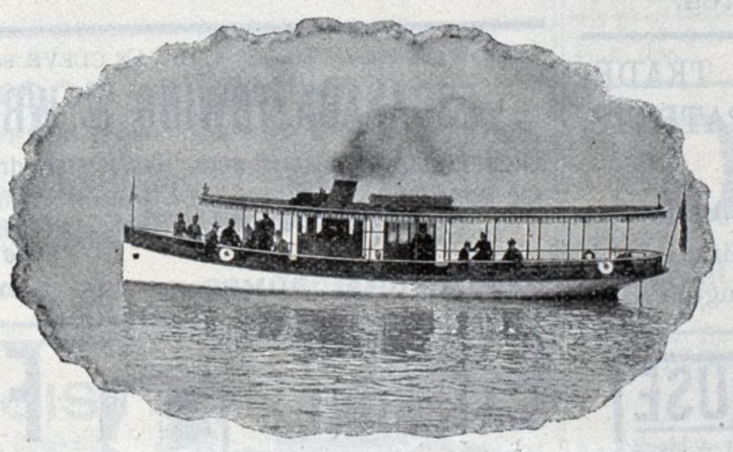

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Oval Agitator, Chicago, 14 and 28x20.
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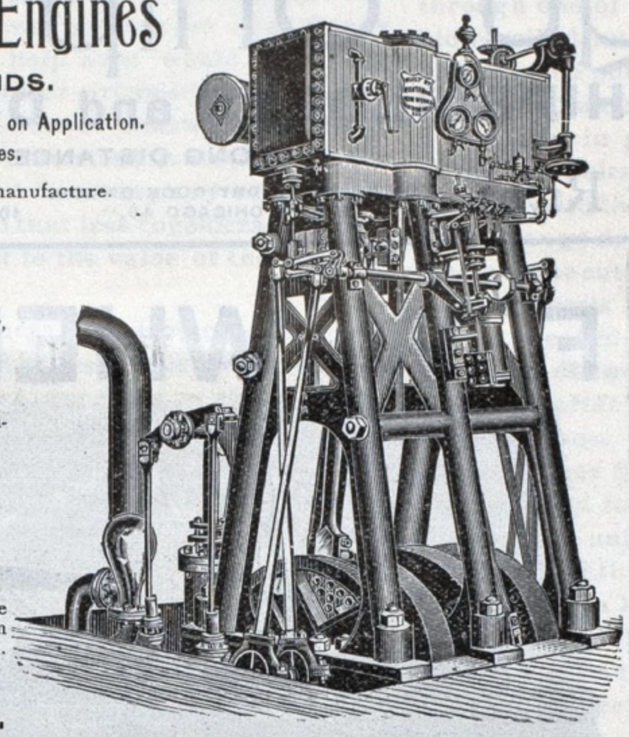

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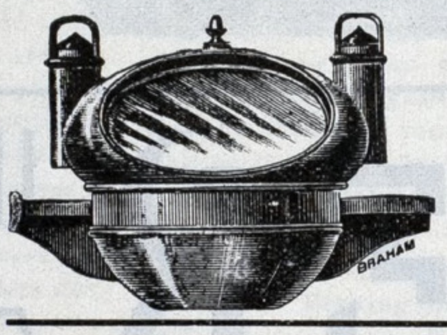

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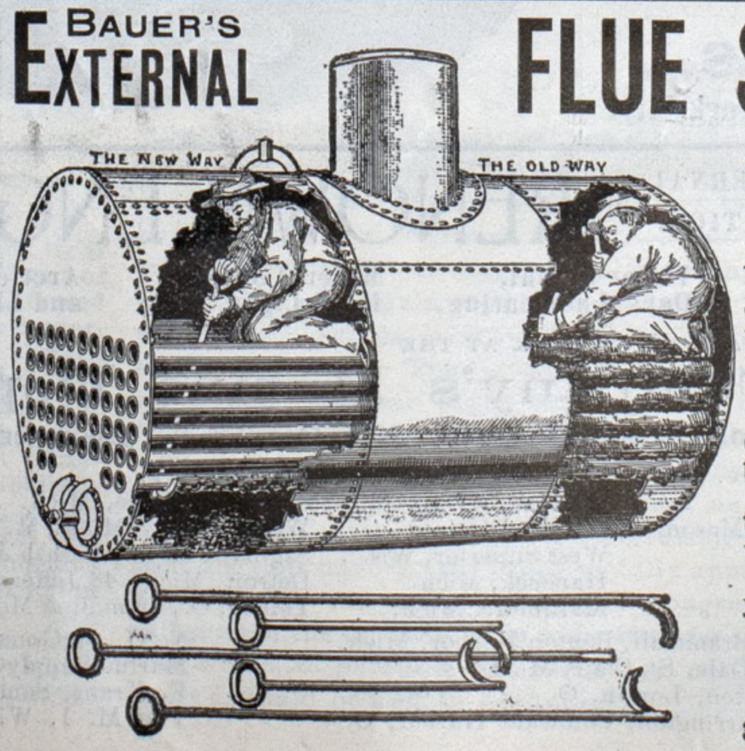

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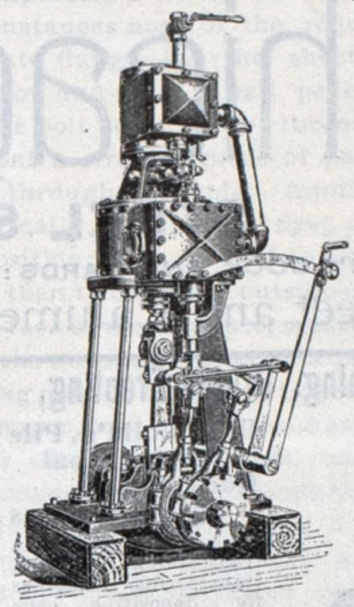

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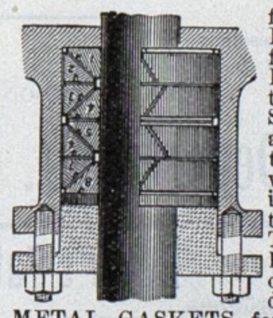

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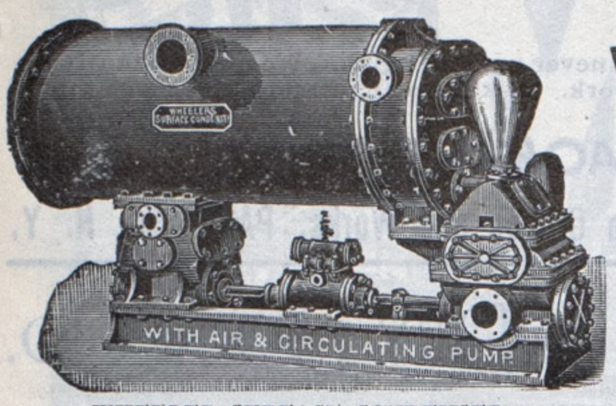
Mounted upon Combined Air and Circulating Pumps.



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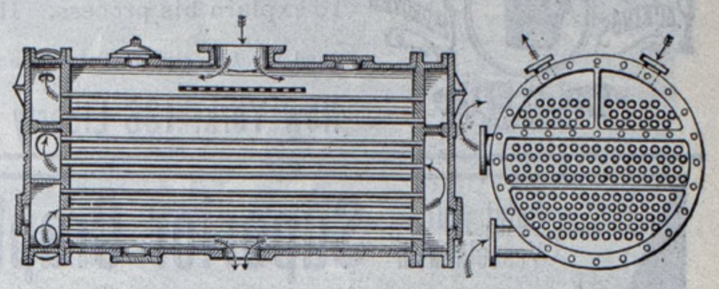

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The Nickel Plate Road offers a rate of a fare and a third on he Certificate plan July 8th to 13th, account National Meeting League of American Wheelmen. 277

For the Glorious Fourth

The Nickel Plate Road offers one fare for the round trip to all points on its line within a radius of 200 miles from starting point. Tickets on sale July 3rd and 4th, good returning until July 5th. 279

Go to the Sea Shore

July 8th to 13th and attend the Meeting of the League of American Wheelmen at Asbury Park, N. J. The Nickel Plate Road has authorized a rate of a fare and a third on the certificate plan. 278

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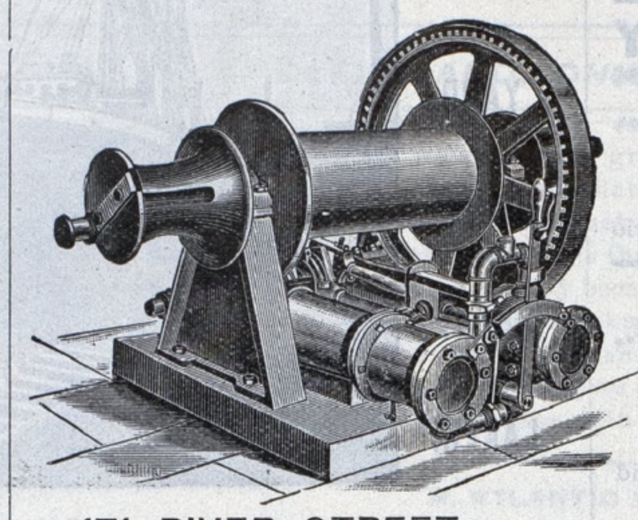

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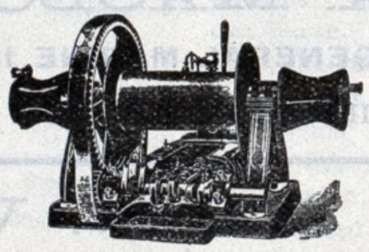

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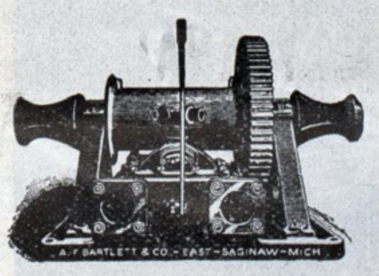

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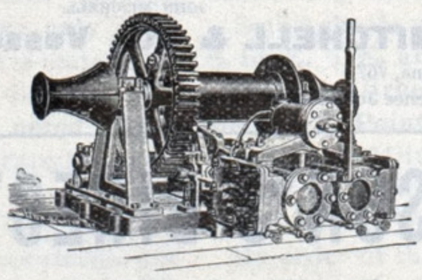

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OFFICE OF LIGHT-HOUSE BOARD, Washington, D. C., June 25, 1895. Sealed proposals will be received at this office until 2 o'clock p. m. on Thursday, the 11th day of July, 1895, for furnishing the materials and labor of all kinds necessary for the construction and delivery of one first-class composite Light-Vessel No. 66, for a fixed sum for said vessel delivered. Forms of proposal, plans and specifications, showing what is required, can be had or seen by applying to this office. The right is reserved to reject any or all bids and to waive any defects. JOHN G. WALKER, Rear-Admiral U. S. N., Chairman. 26

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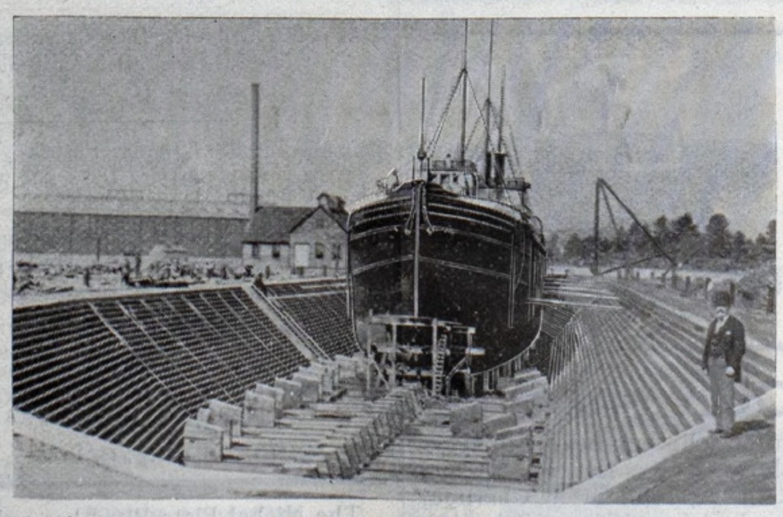

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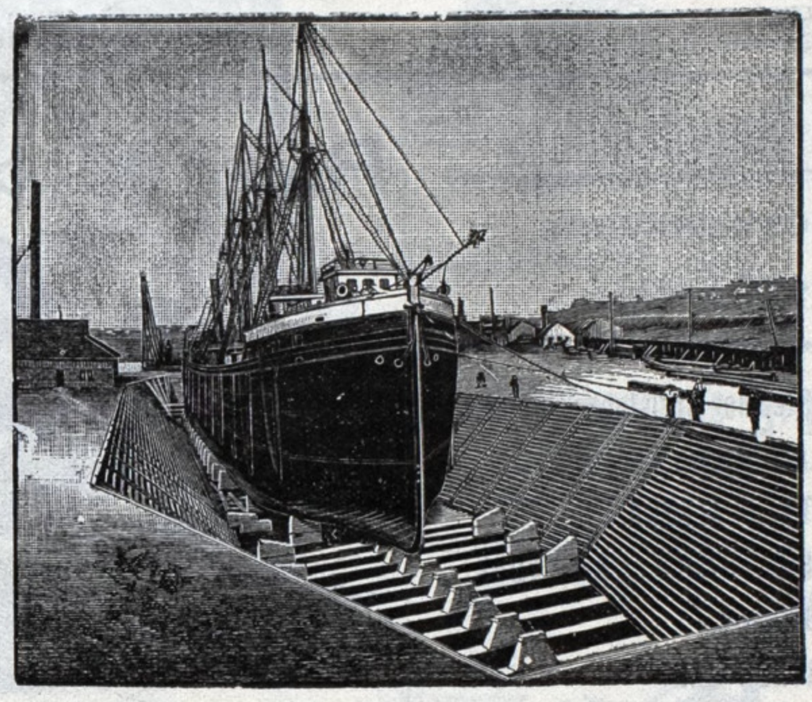

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